Dell Networking

S6000 System

Getting Started Guide

Publication Date: March 2014

Regulatory Model: S6000

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to the hardware or loss of data if you do not follow the instructions.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

If you purchased a Dell n Series computer, any references in this publication to Microsoft Windows operating systems are not applicable.

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Regulatory Model: S6000

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Contents

1 About this Guide 1

2 Introduction 3

Product Description 3

3 Hardware Overview 5

I/O Panel 6

Utility Panel 7

Power Supplies 7

Fans 8

System Status 9

4 Installation 13

Unpacking the Switch 13

Package Contents 13

Unpacking Steps 13

Installing an AC or DC Power Supply 14

Rack Mount the Switch. 15

Rack Mounting Safety Considerations 15

Installing the Dell ReadyRails System 16

Installing the Switch 20

5 Technical Specifications 23

Chassis Physical Design 23

Environmental Parameters 23

Power Requirements 24

Contents

6 Installing the Software 25

Navigating CLI Modes 25

Console Access 25

Default Configuration 27

Configuring Layer 2 (Data Link) Mode 27

Configuring a Host Name 27

Accessing the System Remotely 28

Configuring the Management Port IP Address 28

Configuring the Management Route 29

Configuring the Username and Password 29

Configuring the Enable Password 29

Creating a Port-based VLAN 30

Assigning Interfaces to a VLAN 30

Assigning an IP Address to a VLAN 32

Connecting the S6000 to the Network 32

1

About this Guide

This document is intended as a Getting Started Guide to get new systems up and running and ready for configuration. For complete installation and configuration information, refer to the documents listed in Table 1-1.

Table 1-1. S6000 Documents

Information	Documentation
Hardware installation and power-up instructions	*Installing the S6000 System*
Software configuration	*Dell Networking OS Configuration Guide for the S6000 System*
Command line interface	*Dell Networking OS Command Line Reference Guide for the S6000 System*
Latest updates	*Dell Networking OS Release Notes for the S6000 System*

2

Introduction

This document provides basic information about the S6000 switch, including how to install the switch and perform the initial configuration. For information about how to configure and monitor switch features, refer to the *Dell Networking OS Configuration Guide for the S6000 System*, which is available on the Dell Support website at **support.dell.com/support**.

This document contains the following sections:

- Hardware Overview
- Installation
- Technical Specifications
- Installing the Software

Product Description

The S6000 is a fully featured switch/router one rack unit (RU) system that you can deploy as a spine, leaf, or top of rack (ToR) device where you require 10Gb and/or 40Gb connections. It contains 32 ports of 40G that you can use to create a configuration of 104 ports of 10G small form-factor pluggable plus (SFP+) (using breakout cables).

The S6000 switch runs the Dell Networking operating system, providing switching, bridging, and routing functionality for transmitting data, storage, and server traffic.

In a data center network, the S6000 switch provides converged network support and interoperates with Dell Networking and third-party network devices. The switch supports data center bridging (DCB) features and optimizes connectivity between servers and storage devices using Fibre Channel over Ethernet (FCoE) and internet small computer system interface (iSCSI) links.

By providing increased 40GbE bandwidth for device interconnection in a shared network storage environment, with the possibility of splitting 40GbE quad small form-factor pluggable plus (QSFP+) uplinks into 10GbE SFP+ connections, the S6000 switch is perfectly positioned to help transition a data center with multiple speed requirements.

3

Hardware Overview

This section contains information about device characteristics and modular hardware configurations for the S6000 switch.

The S6000 has the following physical dimensions:

- 434 x 460 x 43.5 mm (W x D x H).
- 17.09 x 18.11 x 1.71 inches (W x D x H).

The S6000 has a chassis design with 1280Gbps switching bandwidth as listed below:

- 32 port 40G QSFP+
- Up to 104 10G ports with QSFP+ breakout

The system also provides one RS-232 interface RJ-45 YOST console port and a dedicated Ethernet management port for out-of-band (OOB) management functions.

The S6000 has the following features:

- Supports one universal serial bus (USB-A) port
- Supports one USB-B console port
- Thirty-two 40Gbps QSFP ports for 40Gbps transceivers
- On-board high-performance central processing unit (CPU) system with large memory
- Temperature monitoring
- Software-readable thermal monitor
- Real time clock (RTC) support
- Hot-plugging redundant power supply
- Current monitoring for power management
- Three removable fan modules
- Standard 1U chassis high

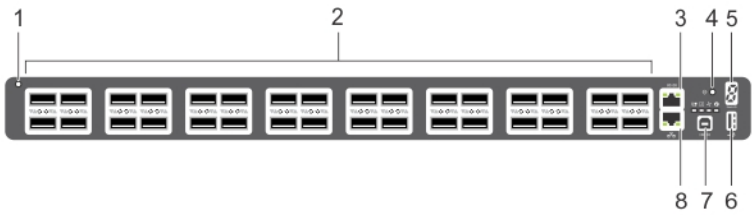
I/O Panel

The I/O panel includes:

- Thirty-two fixed QSFP+ ports
- One USB-A 2.0 port
- One USB-B serial console port
- One RS-232 serial console port
- One 10/100/1000BaseT (RJ-45) Ethernet management port

Figure 3-1 shows the S6000 I/O panel.

Figure 3-1. S6000 I/O Panel



1 - System LED

2 - 32 QSFP+ Ports

3 - Serial Console

4 - Reset

5 - Stack ID

6 - USB-A

7 - USB-B Console

8 - Management

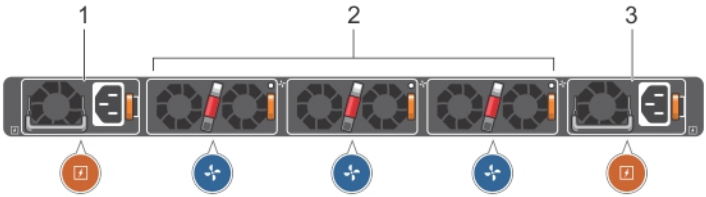
NOTE: The system light emitting diodes (LEDs) are on the I/O panel. The fan tray power indicators are on the Utility panel.

NOTE: For more information about LEDs, refer the System Status section.

Utility Panel

The Utility panel side contains the fan and power modules. Figure 3-2 shows the S6000 power supplies and fan modules.

Figure 3-2. S6000 Power Supplies and Fan Modules



1 - PSU 0

2 - Fan Modules 0-2

3 - PSU 1

Power Supplies

The S6000 supports two hot-swappable Power Supply Units (PSUs). The S6000 supports AC and DC power supplies with two air-flow directions (I/O to PSU and PSU to I/O). Two PSUs are required for full redundancy, but the system can operate with a single PSU.

NOTE: If you use a single PSU, install a blank plate in the other PSU slot. Dell Networking recommends using power supply 1 (PSU1) as the blank plate slot.

The PSUs are field replaceable. When running with full redundancy (two power supplies installed and running), you can remove and replace one PSU while the other PSU is running without disrupting traffic.

The S6000 does not support mixing PSU types. You cannot replace an AC PSU with a DC PSU and you cannot replace an AC-R PSU with a DC-R PSU.

WARNING: Electrostatic discharge (ESD) damage can occur if components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the S6000 and its components.

CAUTION: To prevent electrical shock, ensure the S6000 is grounded properly. If you ground your equipment correctly, excessive emissions may result. To ensure the power cables meet your local electrical requirements, use a qualified electrician.

Fans

The S6000 supports three hot-swappable fans that provide cooling for the system. The S6000 has stock keeping units (SKUs) that support the following configurations. Installation of the fans is done as part of the factory install based on SKU type. The PSUs are installed at the customer site (refer to Power Supplies).

- AC PSU with fan airflow from I/O to PSU
- AC PSU with fan airflow from PSU to I/O
- DC PSU with fan airflow from I/O to PSU
- DC PSU with fan airflow from PSU to I/O

All fans and PSUs in a configuration must be in the same airflow direction. Should a mixed airflow configuration happen, the software notifies you of the invalid configuration.

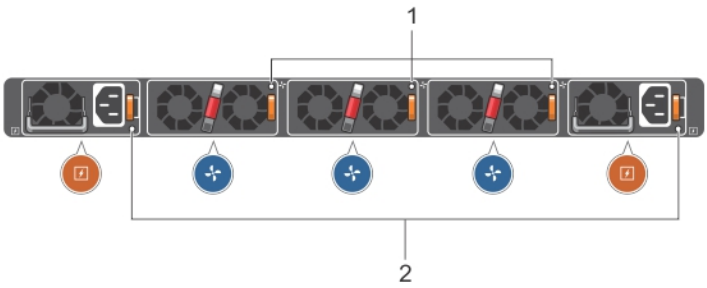
The S6000 supports three fan trays with airflow directions from I/O to Utility or Utility to I/O. The PSU airflow directions are indicated with stickers on PSUs.

System Status

You can view S6000 status information in several ways, including LEDs and boot menu options. You can also view status information through the command line interface (CLI) **show** commands and with the simple network management protocol (SNMP). For more information about these options, refer to the *Dell Networking OS Command Line Reference Guide for the S6000 System* and *Dell Networking OS Configuration Guide for the S6000 System*.

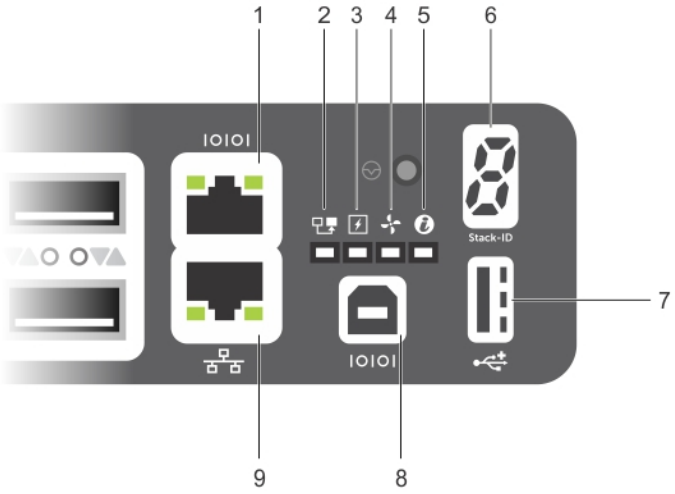
As shown in Figure 3-3, the S6000 includes LED displays on both the I/O and PSU side of the chassis.

Figure 3-3. S6000 PSU and Fan Tray LEDs



1- Fan Tray 0-2 LEDs

2 - PSU 0-1 LEDs



1 - Serial Console

2 - Master LED

3 - Power LED

4 - Fan Status LED

5 - Locator LED

6 - Stack ID

7 - USB-A

8 - USB-B Console

9 - Management

Table 3-1 lists the LED definitions for the S6000 system. This includes system, PSU, and fan status.

Table 3-1. System LED indicators

Feature	Detailed Description	Comment
System LED	• Solid green–Normal operation. CLI prompt available • Blinking green–Boot-up in progress • Solid yellow–Major Fault. Displays summary of all major faults within the system; the faults are traffic affecting • Blinking yellow–Minor Fault. Displays summary of all minor faults within the system; the faults are not traffic affecting	I/O side
Power LED	• Off–No power • Solid Yellow–POST in progress • Solid green–Normal operation (dual or single supply) • Blinking yellow–One of the power supplies has failed	I/O side
FAN LED	• Solid green–Fan powered and running at the expected rpm • Solid yellow–Fan failed including incompatible airflow direction when PSU or fan trays of differing airflows are inserted in the same chassis	I/O side
MASTER LED	• Solid green–System in stacking **Master** mode • Off – Switch in **Slave** mode	I/O side
LOCATOR LED	• Off – No power • Blinking blue – Locator function is enabled • Off – Locator function is disabled	I/O side
7-DIGIT Stack LED	It indicates a number for stacking.	I/O side

NOTE: When one of the FAN LEDs on the utility side indicates failure, the fan LED on the I/O panel displays yellow.

The S6000 supports splitting a single 40G QSFP+ port into 4 x 10G SFP+ ports using one of the supported breakout cables. When you use the fanout feature, the 40G QSFP+ port is deleted and 4 x 10G SFP+ ports are created.

QSFP+ ports have eight LEDs associated with each stack of two ports; four for the top and four for the bottom ports. You can configure each port as a single 40G port or 4 x 10G ports. When configured as a 40G port, only the first of the four LEDs is used. When configured as 4 x 10G ports, all four LEDs are used to indicate the status. Table 3-2 lists the LED status.

Table 3-2. 40G QSFP+/ 4x10G SFP+ Ethernet Port LEDs

Feature	Detailed Description
Link/Activity LED	• Off – No Link • Blinking green – Transmit/Receive is active • Solid green – Link up at 40Gbps/10Gbps speed

Table 3-3. Management Ethernet Port LEDs

Feature	Detailed Description
Link LED	• Off – No Link • Solid green –Link on 10/100M/1G speed
Activity LED	• Off – No Link • Blinking green – Transmit/Receive is active

4

Installation

Unpacking the Switch

This section describes the package contents and the steps to unpack the S6000 switch.

Package Contents

When unpacking each switch, make sure that the following items are included:

- One S6000 switch
- One RJ-45 to DB-9 female cable
- Two sets of rail kits (no tools required)
- Two PSUs
- One AC power cord (country/region specific)
- *Getting Started Guide*
- *Safety and Regulatory Information*
- *Warranty and Support Information*
- *Software License Agreement*

Unpacking Steps

NOTE: Before unpacking the switch, inspect the container and immediately report any evidence of damage.

1. Place the container on a clean, flat surface and cut all straps securing the container.
2. Open the container or remove the container top.
3. Carefully remove the switch from the container and place it on a secure and clean surface.
4. Remove all packing material.
5. Inspect the product and accessories for damage.

Installing an AC or DC Power Supply

To install an AC or DC power supply, follow these steps.

NOTE: The PSU slides into the slot smoothly. Do not force the PSU into a slot as this may damage the PSU or the S6000 chassis.

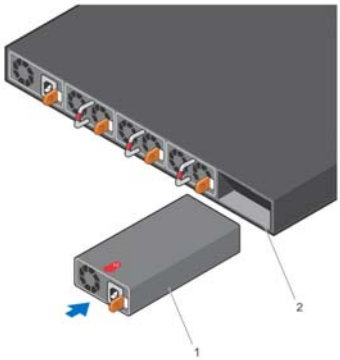
NOTE: Ensure that the PSU is correctly installed. When the PSU is correctly installed, the power connector is on the left side of the PSU and the status LED is at the bottom of the PSU.

NOTE: If you use a single PSU, install a blank plate in the other PSU slot. Dell Networking recommends using power supply 1 (PSU1) as the blank plate slot.

1 Remove the PSU slot cover from the S6000 (the PSU side of switch). You may select either of the two PSU slots.

2 Remove the PSU from the electro-static bag.

3 Insert the PSU into the switch PSU slot (insert the PSU exposed PCB edge connector first).The PSU slot is keyed such that the PSU can only be fully inserted in one orientation.



1 - Slot 1

2 - PSU1

When the PSU is installed correctly, it snaps into place and is flush with the back of the switch.

4 Plug in the appropriate cord (AC 3 prong or DC wiring) from the switch PSU to the external power source (either an AC wall outlet or a DC rack bus bar).

5 If you have a redundant PSU (a second PSU), repeat steps 1 through 4 above using the second PSU slot.

NOTE: The system powers up as soon as the cables are connected between the power supply and the power source.

Rack Mount the Switch

You may either place the switch on the rack shelf or mount the switch directly into a 19" wide, EIA-310-E-compliant rack (four-post, two-post, or threaded methods). The Dell ReadyRails™ system is provided for 1U front-rack and two-post installations. The ReadyRails system includes two separately packaged rail assemblies and two rails that are shipped attached to the sides of the switch.

WARNING: This is a condensed reference. Read the safety instructions in your Safety, Environmental, and Regulatory information booklet before you begin.

CAUTION: Do not use the mounted Ready-Rails as a shelf or a workplace.

NOTE: The illustrations in this document are not intended to represent a specific switch.

Rack Mounting Safety Considerations

- Rack loading — Overloading or uneven loading of racks may result in shelf or rack failure, causing damage to the equipment and possible personal injury. Stabilize racks in a permanent location before loading begins. Mount the components beginning at the bottom of the rack, then work to the top. Do not exceed your rack load rating.
- Power considerations — Connect only to the power source specified on the unit. When you install multiple electrical components in a rack, ensure that the total component power ratings do not exceed the circuit capabilities. Overloaded power sources and extension cords present fire and shock hazards.
- Elevated ambient temperature — If installed in a closed rack assembly, the operating temperature of the rack environment may be greater than the room ambient temperature. Use care not to exceed the 40°C maximum ambient temperature of the switch.
- Reduced air flow — Install the equipment in the rack so that the amount of airflow required for safe operation of the equipment is not compromised.

- Reliable earthing — Maintain reliable earthing of rack-mounted equipment. Pay particular attention to the supply connections other than the direct connections to the branch circuit; for example, use of power strips.
- Do not mount the equipment with the rear panel facing in the downward position.

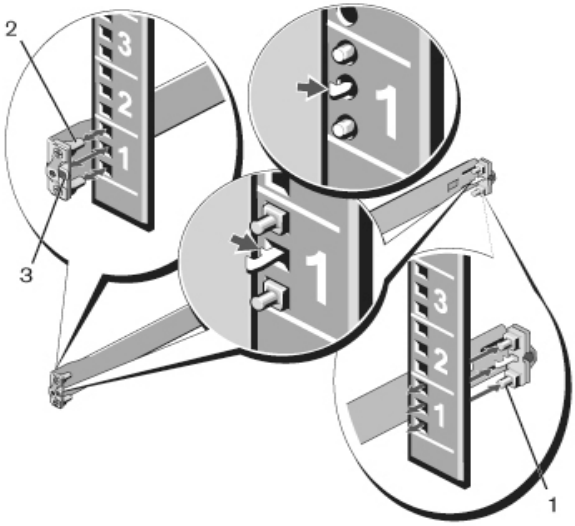
Installing the Dell ReadyRails System

The ReadyRails rack mounting system is provided to easily configure your rack for installation of your switch. You can install the ReadyRails system using the 1U tool-less method or one of three possible 1U tooled methods (two-post flush mount, two-post center mount, or four-post threaded).

1U Tool-less Configuration (Four-Post Square Hole or Unthreaded Round Hole):

1 With the ReadyRails flange ears facing outward, place one rail between the left and right vertical posts. Align and seat the rear flange rail pegs in the rear vertical post flange. In Figure 4-1, item 1 shows how the pegs appear in both the square and unthreaded round holes.

Figure 4-1. 1U Tool-less Configuration



2 Align and seat the front flange pegs in the holes on the front side of the vertical post. Refer to Figure 4-1, item 2.

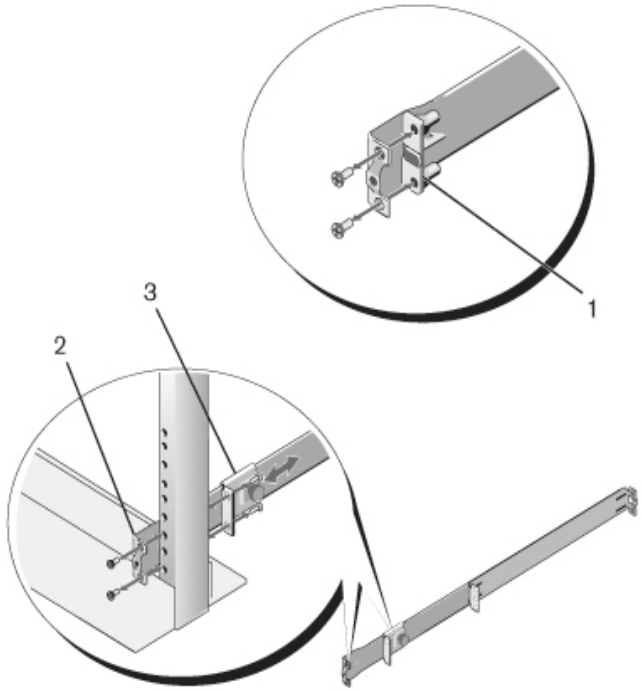
3 Repeat this procedure for the second rail.

4 To remove each rail, pull on the latch release button on each flange ear and unseat each rail. Refer to Figure 4-1, item 3.

Two-Post Flush-Mount Configuration:

1 For this configuration, remove the castings from the front side of each ReadyRails assembly. Refer to Figure 4-2, item 1. Use a Torx driver to remove the two screws from each front flange ear (on the switch side of the rail) and remove each casting. Retain the castings for future rack requirements. It is not necessary to remove the rear flange castings.

Figure 4-2. Two-Post Flush-Mount Configuration



2 Attach one rail to the front post flange with two user-supplied screws. Refer to Figure 4-2, item 2.

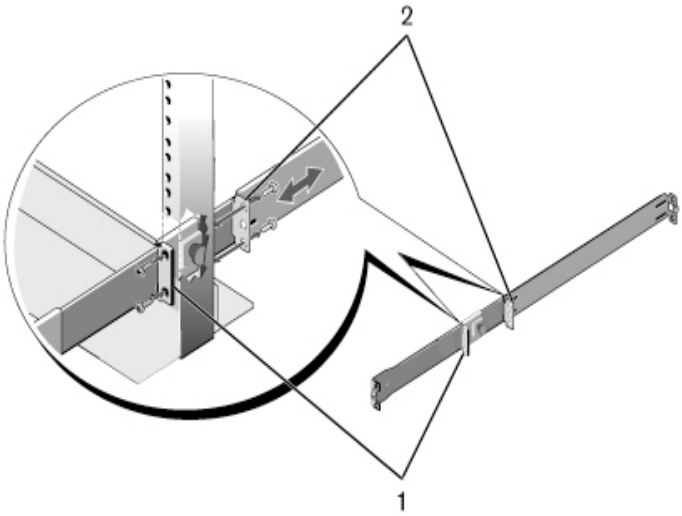
3 Slide the plunger bracket forward against the vertical post and secure the plunger bracket to the post flange with two user-supplied screws. Refer to Figure 4-2, item 3.

4 Repeat this procedure for the second rail.

Two-Post Center-Mount Configuration:

1 Slide the plunger bracket rearward until it clicks into place and secure the bracket to the front post flange with two user-supplied screws. Refer to Figure 4-3, item 1.

Figure 4-3. Two-Post Center-Mount Configuration



2 Slide the back bracket towards the post and secure it to the post flange with two user-supplied screws. Refer to Figure 4-3, item 2.

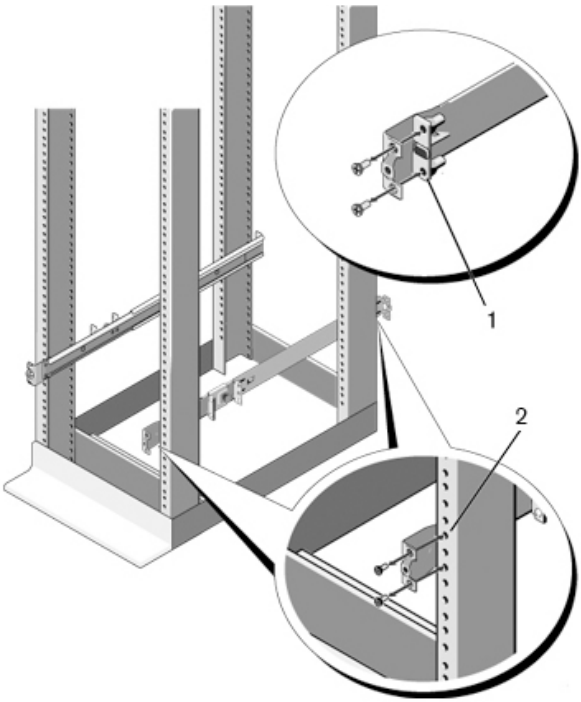
3 Repeat this procedure for the second rail.

Four-Post Threaded Configuration:

1 For this configuration, remove the flange ear castings from each end of the ReadyRails assemblies. Use a Torx driver to remove the two screws from each flange ear and remove each casting. Refer to Figure 4-4, item 1. Retain the castings for future rack requirements.

2 For each rail, attach the front and rear flanges to the post flanges with two user-supplied screws at each end. Refer to Figure 4-4, item 2.

Figure 4-4. Four-Post Threaded Configuration



Installing the Switch

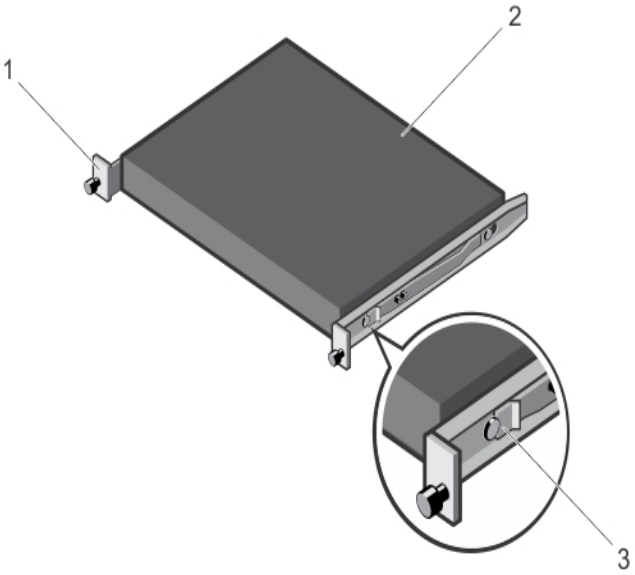
You can mount the switch in the 1U front-rack or 1U two-post (flush and center) configurations. The following is an example of a 1U front-rack configuration. For the 1U two-post (flush and center) configurations, slide the switch into the rails in the same manner as the four-post configurations.

1U Front-Rack Installation

Configure the rails that are attached to the switch.

1 Attach the switch rails (inner chassis members) to the S6000 switch. Figure 4-5, item 3 shows the detail for the front standoff with the locking tab.

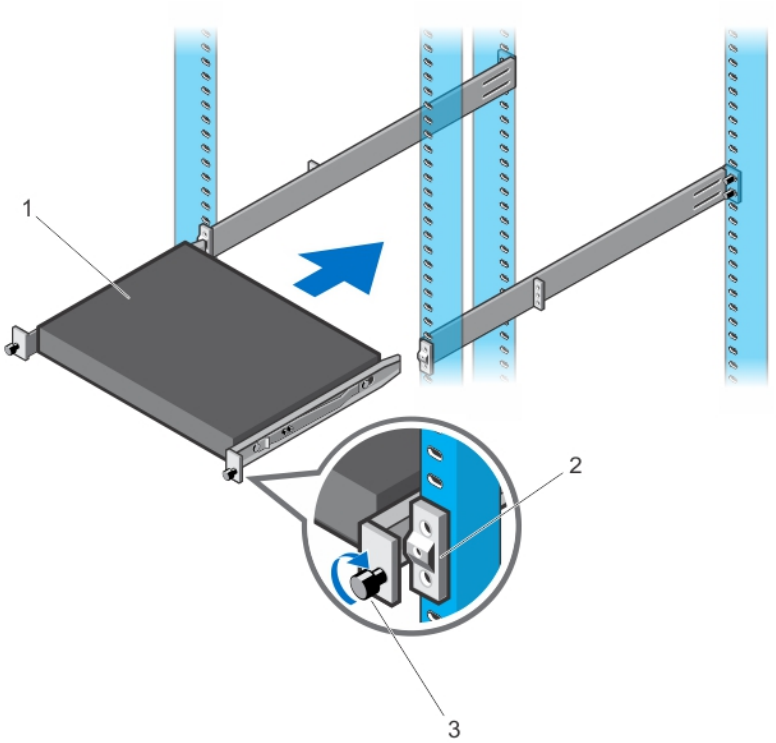
Figure 4-5. Attaching the Switch Rails



2 After you install both switch rails, line them up on the previously mounted Ready-Rails and slide the switch in until it is flush with front of rack. About three inches prior to full insertion, the rail locking feature engages to keep the switch from inadvertently sliding out of the rack and falling. Refer to Figure 4-6.

CAUTION: Do not use the mounted Ready-Rails as a shelf or a workplace.

Figure 4-6. Front Rack Installation



5

Technical Specifications

Operate the product at an ambient temperature not higher than 40°C.

⚠ **Lithium Battery Caution: There is a danger of explosion if the battery is incorrectly replaced.** Replace only with same or equivalent type. Dispose of the batteries according to the manufacturer's instructions.

Chassis Physical Design

Parameter	Specifications
Height	1.71 inches (43.5 mm)
Width	17.09 inches (434 mm)
Depth	18.11 inches (460 mm)

Environmental Parameters

Parameter	Specifications
Operating temperature	32° to 113°F (0° to 45°C)
Operating humidity	5 to 90% (RH), non-condensing
Storage temperature	–40° to 158°F (–40° to 70°C)
Storage humidity	5 to 90% (RH), non-condensing
Maximum thermal output	419.7 BTU/hr

Power Requirements

Parameter	Specifications
Power supply	100–240 VAC 50/60 Hz
Maximum current draw per system	2.9 A @ 286 watts/100vac 1.4 A @ 286 watts/200vac
Maximum power consumption	286 Watts
Reliability	MTBF 355,178 hours

6

Installing the Software

Navigating CLI Modes

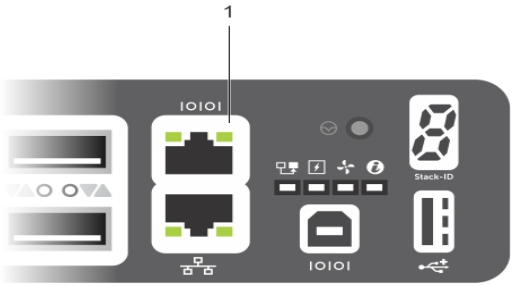
The Dell Networking OS prompt changes to indicate the CLI mode. You must move linearly through the command modes, with the exception of the **end** command which takes you directly to EXEC Privilege mode and the **exit** command which moves you up one command mode level.

Console Access

NOTE: You must have a password configured on a virtual terminal line before you can Telnet into the S6000 system. Therefore, use a console connection when connecting to the system for the first time. Before starting this procedure, be sure you have a terminal emulation program already installed on your PC.

The RS-232 console port is labeled on the upper right-hand side of the S6000 system as you face the input/output (I/O) side of the chassis (Figure 6-1).

Figure 6-1. RS-232 Console Port



1- RS-232 console port

To set up the RS-232 console port, follow these steps.

Step	Task
1	Install an RJ-45 copper cable into the console port. Use a rollover cable to connect the S6000 console port to a terminal server.
2	Connect the other end of the cable to the DTE terminal server.
3	Set the default terminal settings as follows: • 9600 baud rate • No parity • 8 data bits • 1 stop bit • No flow control

Accessing the RJ-45 Console Port with a DB-9 Adapter

If the DTE has a DB-9 interface, you can connect to the console using an RJ-45 to DB-9 adapter along with the RJ-45 rollover cable. Table 6-1 lists the pin assignments.

Table 6-1. Pin Assignments Between the Console and a DTE Terminal Server

Console Port	RJ-45 to RJ-45 Rollover Cable		RJ-45 to DB-9 Adapter	Terminal Server Device
Signal	RJ-45 Pinout	RJ-45 Pinout	DB-9 Pin	Signal
RTS	1	8	8	CTS
NC	2	7	6	DSR
TxD	3	6	2	RxD
GND	4	5	5	GND
GND	5	4	5	GND
RxD	6	3	3	TxD
NC	7	2	4	DTR
CTS	8	1	7	RTS

Default Configuration

A version of Dell Networking OS is pre-loaded onto the S6000 system; however, the system is not configured when you power up for the first time (except for the default host name, which is `Dell`). You must configure the system using the CLI.

Configuring Layer 2 (Data Link) Mode

To enable Layer 2 data transmissions through an individual interface, use the **switchport** command in INTERFACE mode. You cannot configure switching or Layer 2 protocols such as spanning tree protocol (STP) on an interface unless the interface has been set to Layer 2 mode.

To configure Layer 2 mode, follow these steps.

Step	Task	Command Syntax	Command Mode
1	Enable the interface.	**no shutdown**	INTERFACE
2	Place the interface in Layer 2 (switching) mode.	**switchport**	INTERFACE

To view the interfaces in Layer 2 mode, use the **show interfaces switchport** command in EXEC mode.

Configuring a Host Name

The host name appears in the prompt. The default host name is `Dell`. Host names must start with a letter, end with a letter or digit, and must have characters, letters, digits, and hyphens in the string.

To configure a host name, follow this step.

Task	Command Syntax	Command Mode
Create a new host name.	**hostname** *name*	CONFIGURATION

Accessing the System Remotely

You can configure the S6000 system to be accessed remotely by Telnet. The system has a dedicated management port and a management routing table that is separate from the IP routing table.

To access the system remotely, follow these steps.

Step	Task
1	Configure an IP address for the management port (Configuring the Management Port IP Address).
2	Configure a management route with a default gateway (Configuring the Management Route).
3	Configure a username and password (Configuring the Username and Password).

Configuring the Management Port IP Address

In order to access the system remotely, assign IP addresses to the management ports.

To assign IP addresses to the management ports, follow these steps.

Step	Task	Command Syntax	Command Mode
1	Enter INTERFACE mode for the Management port.	**interface ManagementEthernet** *slot/port*	CONFIGURATION
2	Assign an IP address to the interface.	**ip address** *ip-address/mask*	INTERFACE
3	Enable the interface.	**no shutdown**	INTERFACE

Configuring the Management Route

Define a path from the S6000 to the network from which you are accessing the S6000 remotely. Management routes are separate from IP routes and are used to manage the S6000 through the management port.

To configure a management route, follow this step.

Task	Command Syntax	Command Mode
Configure a management route to the network from which you are accessing the system.	**management route** *ip-address/mask gateway*	CONFIGURATION

Configuring the Username and Password

To access the system remotely, configure a system username and password.

To configure a username and password, follow this step.

Task	Command Syntax	Command Mode
Configure a username and password to access the system remotely.	**username** *username* **password** [*encryption-type*]	CONFIGURATION

Configuring the Enable Password

Access EXEC Privilege mode using the **enable** command. EXEC Privilege mode is unrestricted by default. As a basic security measure, configure a password. There are two types of enable passwords:

- enable password — stores the password in the running/startup configuration using a data encryption standard (DES)-encryption method.
- enable secret — stores the password in the running/startup configuration using a stronger, MD5-encryption method.

Dell Networking recommends using the enable secret password.

To configure the enable secret password, follow this step.

Task	Command Syntax	Command Mode
Create a password to access EXEC Privilege mode.	**enable [password | secret] [level** *level*] [*encryption-type*] *password*	CONFIGURATION

Creating a Port-based VLAN

The default VLAN (VLAN 1) is part of the system startup configuration and does not require configuration. To configure a port-based VLAN, create the VLAN and then add physical interfaces or port channel (LAG) interfaces to the VLAN.

To create a port-based VLAN, follow this step.

Task	Command Syntax	Command Mode
Configure a port-based VLAN (if the *vlan-id* is different from the Default VLAN ID) and enter INTERFACE VLAN mode. After you create a VLAN, you must assign interfaces in Layer 2 mode to the VLAN to activate the VLAN.	**interface vlan** *vlan-id*	CONFIGURATION

To view the configured VLANs, use the **show vlan** command in EXEC Privilege mode.

Assigning Interfaces to a VLAN

You can only assign interfaces in Layer 2 mode to a VLAN using the **tagged** and **untagged** commands. To place an interface in Layer 2 mode, use the **switchport** command.

You can designate Layer 2 interfaces as tagged or untagged. When you place an interface in Layer 2 mode using the **switchport** command, the interface is automatically designated untagged and placed in the Default VLAN.

To view which interfaces are tagged or untagged and to view which VLAN the interfaces belong, use the **show vlan** command. To view just the interfaces that are in Layer 2 mode, use the **show interfaces switchport** command in EXEC Privilege mode or EXEC mode.

To tag frames leaving an interface in Layer 2 mode, assign that interface as tagged to a port-based VLAN to tag it with that VLAN ID.

To tag interfaces, follow these steps.

Step	Task	Command Syntax	Command Mode
1	Access INTERFACE VLAN mode of the VLAN to which you want to assign the interface.	**interface vlan** *vlan-id*	CONFIGURATION
2	Enable an interface to include the IEEE 802.1Q tag header. This command is available only in VLAN interfaces.	**tagged** *interface*	INTERFACE

To move untagged interfaces from the Default VLAN to another VLAN, use the **untagged** command.

To move untagged interfaces, follow these steps.

Step	Task	Command Syntax	Command Mode
1	Access INTERFACE VLAN mode of the VLAN to which you want to assign the interface.	**interface vlan** *vlan-id*	CONFIGURATION
2	Configure an interface as untagged. This command is available only in VLAN interfaces.	**untagged** *interface*	INTERFACE

Assigning an IP Address to a VLAN

VLANs are a Layer 2 feature. For two physical interfaces on different VLANs to communicate, assign an IP address to the VLANs to route traffic between the two interfaces. The **shutdown** command in INTERFACE mode does not affect Layer 2 traffic on the interface.

NOTE: You cannot assign an IP address to the Default VLAN, which, by default, is VLAN 1. To assign another VLAN ID to the Default VLAN, use the **default vlan-id** *vlan-id* command from the configuration mode.

To assign an IP address to a VLAN, follow this step.

Task	Command Syntax	Command Mode
Access INTERFACE VLAN mode of the VLAN to which you want to assign the IP address. Configure an IP addresses and mask on the interface.	**ip address** *ip-address mask* [*secondary*]	INTERFACE

Connecting the S6000 to the Network

After you have completed the hardware installation and software configuration for the S6000 system, you can connect to your company network by following your company's cabling requirements.

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